

Serial No. 09/965,825
Response to Office Action of August 12, 2003

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A process for preparing D-pantothenic acid comprising

- a. culturing a *Coryneform* bacteria comprising an attenuated poxB gene in a medium suitable for producing D-pantothenic acid; and
- b. collecting the D-pantothenic acid produced.

Claim 2 (Original): The process of Claim 1, wherein said poxB gene comprises the nucleotide sequence of SEQ ID NO:12.

Claim 3 (Original): The process of Claim 1, wherein said poxB gene comprises SEQ ID NO:6.

Claim 4 (Original): The process of Claim 1, wherein said poxB gene comprises SEQ ID NO:7.

Claim 5 (Original): The process of Claim 1, wherein said poxB gene comprises SEQ ID NO:4.

Claim 6 (Original): The process of Claim 1, wherein said D-pantothenic acid is concentrated prior to said collecting.

Claim 7 (Original): The process of Claim 1, wherein said D-pantothenic acid is concentrated after said collecting.

Claim 8 (Original): The process of Claim 1, wherein said poxB gene comprises a nucleotide sequence which hybridizes under stringent conditions to the nucleotide sequence of SEQ ID NO:1 and which encodes a PoxB protein having attenuated PoxB activity, wherein said stringent conditions comprise washing in 5X SSC at a temperature from 50 to 68°C.

Serial No. 09/965,825
Response to Office Action of August 12, 2003

Claim 9 (Original): The process of Claim 1, wherein said *poxB* gene is eliminated in said *Coryneform* bacteria.

Claim 10 (Original): The process of Claim 1, wherein said *Coryneform* bacteria is *Coryneform glutamicum*.

Claim 11 (Original): The process of Claim 1, wherein said *Coryneform* bacterium is selected from the group consisting of *Coryneformbacterium acteoglutamicum*, *Coryneformbacterium acetoacidophilum*, *Coryneformbacterium thermoaminogenes*, *Brevibacterium flavum*, *Brevibacterium lactofermentum*, and *Brevibacterium davaricatum*.

Claim 12 (Original): The process of Claim 1, wherein said *Coryneform* bacterium further comprises at least one gene whose expression is enhanced, wherein said gene is selected from the group consisting of *panB*, *panC*, and *ilvD*.

Claim 13 (Original): *Escherichia coli* DSM 13114.

Claim 14 (Currently Amended): A process for producing D-pantothenic acid comprising:

- a. transforming a *Coryneform* bacteria with a vector comprising the polynucleotide sequence of SEQ ID NO:3;
- b. selecting *Coryneform* bacteria that have attenuated *poxB* expression;
- c. culturing said selected *Coryneform* bacteria in a medium suitable for producing D-pantothenic acid; and
- d. collecting the D-pantothenic acid produced.

Claim 15 (Original): The process of Claim 14, wherein said *poxB* gene comprises a nucleotide sequence which hybridizes under stringent conditions to the nucleotide sequence

Serial No. 09/965,825

Response to Office Action of August 12, 2003

of SEQ ID NO:1 and which encodes a PoxB protein having attenuated PoxB activity, wherein said stringent conditions comprise washing in 5X SSC at a temperature from 50 to 68°C.

Claim 16 (Original): The process of Claim 14, wherein said *Coryneform* bacteria is *Coryneform glutamicum*.

Claim 17 (Original): The process of Claim 14, wherein said *Coryneform* bacterium is selected from the group consisting of *Coryneformbacterium acteoglutamicum*, *Coryneformbacterium acetoacidophilum*, *Coryneformbacterium thermoaminogenes*, *Brevibacterium flavum*, *Brevibacterium lactofermentum*, and *Brevibacterium davaricatum*.

Claim 18 (Original): The process of Claim 14, wherein said *Coryneform* bacterium further comprises at least one gene whose expression is enhanced, wherein said gene is selected from the group consisting of panB, panC, and ilvD.

Claim 19 (Original): A *Coryneform* bacteria comprising an attenuated poxB gene.

Claim 20 (Original): The *Coryneform* bacteria of Claim 19, which is a *Corynebacterium glutamicum*.

Claim 21 (Original): The *Coryneform* bacteria of Claim 19, wherein said attenuated poxB gene comprises the nucleotide sequence of SEQ ID NO:12.

Claim 22 (Currently Amended): A process for producing D-pantothenic acid comprising:

- a. transforming a *Coryneform* bacteria with a vector comprising the polynucleotide sequences of SEQ ID NO:6 and SEQ ID NO:7;
- b. selecting *Coryneform* bacteria that have attenuated poxB expression;

Serial No. 09/965,825
Response to Office Action of August 12, 2003

- c. culturing said selected *Coryneform* bacteria in a medium suitable for producing D-pantothenic acid; and
- d. collecting the D-pantothenic acid produced.

Claim 23 (Original): The process of Claim 22, wherein said poxB gene comprises a nucleotide sequence which hybridizes under stringent conditions to the nucleotide sequence of SEQ ID NO:1 and which encodes a PoxB protein having attenuated PoxB activity, wherein said stringent conditions comprise washing in 5X SSC at a temperature from 50 to 68°C.

Claim 24 (Original): The process of Claim 22, wherein a sequence comprising SEQ ID NO:1 is deleted in the attenuated poxB gene.

Claim 25 (Original): The process of Claim 22, wherein said *Coryneform* bacteria is *Coryneform glutamicum*.

Claim 26 (Original): The process of Claim 22, wherein said *Coryneform* bacterium is selected from the group consisting of *Coryneformbacterium acteoglutamicum*, *Coryneformbacterium acetoacidophilum*, *Coryneformbacterium thermoaminogenes*, *Brevibacterium flavum*, *Brevibacterium lactofermentum*, and *Brevibacterium davaricatum*.

Claim 27 (Original): The process of Claim 22, wherein said *Coryneform* bacterium further comprises at least one gene whose expression is enhanced, wherein said gene is selected from the group consisting of panB, panC, and ilvD.

Claim 28 (Original): An isolated polynucleotide comprising the nucleotide sequence of SEQ ID NO:6.

Claim 29 (Original): An isolated polynucleotide comprising the nucleotide sequence of SEQ ID NO:7.

Serial No. 09/965,825

Response to Office Action of August 12, 2003

Claim 30 (Original): An isolated polynucleotide comprising the nucleotide sequence of SEQ ID NO:12.

Claim 31 (New): The process of Claim 1, wherein said *Coryneform* bacterium further comprises at least one gene whose expression is enhanced, wherein said gene is selected from the group consisting of panB, panC, and panD.